

The Effectiveness of a Multi Sensory Approach in Improving Letter-Sound Correspondence among Mild Intellectual Disabled Students in State of Kuwait

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Abstract

This research examines the effectiveness of multi sensory approach for the purpose of improving the knowledge on English Letter sound correspondence among mild disabled students in the state of Kuwait. The discussion in this study is based on the multisensory approach that could be applied in the teaching of reading skills as well as phonemic awareness skills which could enable the students to acquire the early skills of reading. A total of 20 respondents were involved in the process of gathering data through the quantitative study method, which compromises of male and female mild intellectual disabled students. A pretest-posttest method was applied in order to examine the effectiveness of the multisensory approach that could make it possible for them to identify the letters and its sounds. T test for the paired sample was used to figure out the significant differences between the pretest and posttest scores achieved by the students. The findings of the study showed the effect of the multi sensory approach in the teaching process of identifying the English letters and its sounds, which at the same time pave a way for the students to apply the mentioned skills in their learning process to read. This study is also significant for schools, centres, and institutes that are involved in the field of special education. Finally, it is considered as a road map to enable the students to learn and acquire the early skills of reading.

Keywords: Multi sensory approach, English language letter identification, letter sound correspondence, mild intellectual disability.

1. Introduction

According to Rondale (2000) a priority in that century to everyone is to know and learn a second language which enable him to be more effective in the society, moreover, a basic aim of special education program is to find programs that enhance the quality of life for special education students. English language is known with its widespread around the world as a dominant language, it is considered to be the language of internet, commercials, industry, advertisement and the language of business. Mohammadain (2016), claimed that teaching English to intellectually disabled students is more complicated than teaching it to normal EFL. He stated that the complexity of teaching English to intellectually disabled as it requires specific techniques and methods. Students with intellectual disability experience difficulties in language classes, Banks (2008) discussed the negative role of low motivation, high anxiety and the negative attitude towards learning a second language which affect their ability to learn new skills in the new language, consequently, the situation is worse when it comes to teaching a second language to intellectual disabled students because they suffer from several mental impairments. However, Rondale (2000) reported cases for special education students who were able to learn second language. He also added that students who raised with bilingual parents they can develop a certain degree of bilingualism. Krapez (2010) discussed two main points that play a role in the success of the program of teaching them a second language, He adopted that the teacher foreign language competence and the suitable pedagogical approach. Also Barker et al (2010) refers to the fact that students with intellectual disability often lag behind their peers in achieving literacy skills due to the academic difficulties that they have due to the intellectual disability. However, Allor et al (2010) encouraged the teachers to seek out additional resources that encourage a comprehensive approach to reading instructions and they urged teachers to make reading intervention meaningful to the students.

2. Background of the study:

Mild intellectual disabled children are considered as the biggest group in the community of intellectual disability. According to the information provided by the DSMIV, it was assured that they made up about 85% of all the intellectual disabled students. Moreover, they are the educable group who are able to reach a higher level of education compared to the other groups. According to Howard (2005), the educational goals of the mild ID include the desire and need to become independent and self sufficient. Meanwhile, Patton et al. (1996) clarified that there are several basic goals of educating the mild ID students which include the need to be competent in applying the basic life skills, live independently, and be successfully employed. On top of that, reading also helps the mild ID students to be confident and more successful in life (Koppenhaver, Coleman, Kalman, & Yoder,). Subsequently, Donahue and Prescott (1988) pointed out the importance of teaching the reading skills to the ID students, which is believed to enable them to be more acceptable in the society and live better. Bradford et al. (2006) mentioned that a lack of reading could limit the quality of life of the mild ID students. Therefore, the teaching of reading

skills to them will definitely improve their quality of life, particularly for those who are literate.

Letter knowledge and Phonological awareness skills are considered a strong predictors of reading acquisition for reading beginners especially in young children. (Ehri, 2004; Share, Jorm, MacLean, & Matthews, 1984). According to a study by Nietupski (1979) indicated to the importance of explicit instructions to teach letter sound correspondence furthermore, the results of that study revealed that knowing letter sound correspondence will enable the student to learn reading CVC words especially when the student learns to blend the sounds together .there are different strategies which used to teach the skill of letter sound correspondence like the Direct instruction method. In a study by Bradford et al (2006) which shows that students with intellectual disability are able to master some skills of word analysis like letter sound correspondence and blending these sounds together to read words however , some of the students were not able to do well in telescoping.

According to the studies of teaching reading to the intellectual disabled students letter sound correspondence is considered a very important part in the process of teaching reading. Moreover, it is considered to be a factor which enables the student to reach a good level in literacy. The phonemes which are the smallest unit of the spoken language is considered a very important factor in learning to read. Subsequently lots of research have been done to address teaching the students to phonemic awareness skills which is basically learnt through the mastering of letter sound correspondence. The national reading panel found that manipulating sounds and realizing the relationship between letters and its sounds consequently later they will be able to blend these sounds together to read words. Wood and Mclemore (2001) stated that students learns first the letters then they learn to associate the letters with its sounds after that they can learn the phonemic awareness skills to read words.

3. Multi Sensory Approach

The multi sensory approach is also known as the O&G method (Orton Gillingham approach). The aim of this approach is to teach students to read through the use of different senses. According to Davis (2011), Orton believes that students are able to learn better by remembering the letters if they are allowed to see, pronounce, and write the letters. Davis (2011) also added that the first one to bring the notion of blending sounds together to read a new word was Orton. There are different features involved in the multi sensory approach such as the auditory method and the visual method. In the auditory method, the student is trained to identify the auditory sounds and point to the letters when they hear the sounds, while the visual method focuses on teaching the student to identify specific letter from other letters and link them to their sound when they are shown the letters. Similarly, there are also tactile activities which encourage the student to use their hands and fingers in writing the letter or drawing it in the air. Davis (2011) urges that the physical engagement of touching the grapheme enables the student to stay focus, while imprinting the shape of the grapheme in the mind which will foster the ability of the students to remember the sound or the letter

3.1 Research Question

What is the effectiveness of the multisensory approach in teaching letter sound correspondence?

3.2 Research Objective

To determine the effect of using multisensory approach in teaching letter sound correspondence

3.3 Research Hypothesis

There is no significant difference between the means of the pretest and post-test in letter sound correspondence.

4. Design and methodology

4.1 Study sample

A total of 20 students with mild intellectual disability participated in this study for two month intervention in special needs centre in state of Kuwait the students were purposefully chosen to participate in this study. IQ scores were obtained from the centre and

Table 1.1 Study main sample

Participants	NO of participants
Students	20

4.2 Design of the study

A quasai experimental design is applied in this study with a pre test post test one group sample. the teacher will use the T-test for paired sample to analyze the data

4.3 INSTRUMENT OF THE STUDY

The researcher prepared a special test to measure the knowledge of the student in the letter sound correspondence. The test was prepared after the researcher has studied international test that measure the same skills like the

DIBELS and BRIGANCE III. The test that was prepared especially for this study consists of three main parts the first part for letter identification and the second part for letter sound correspondence and the third part for reading CVC words. For the specific use of this study, the researcher used the second part which is for the letter sound correspondence.

4.3.1 The reliability and validity of the research instrument:

Firstly the researcher did a internal consistency for the test to ensure its reliability to the application of the study and the results are shown below

Table 1.2

Item No.	Dimension of the test	Coefficient of the correlation
1	Part two Letter sound correspondence	0.941**

** Significant level $\alpha=0.01$

Secondly, the researcher used the test retest reliability to ensure the validity of test and the cronbach's alpha was (.873) which indicated to a high reliability for test

Reliability Statistics

Cronbach's Alpha	No of Items
.873	8

The alpha coefficient for the 8items is .873, suggesting that the items have relatively high internal consistency. (Note that a reliability coefficient of .70 or higher is considered "acceptable" in most social science research situations.)

Thirdly, the test was sent to five experts in the field of the special education to show their opinions and review it to be used in the study and the researchers considered their suggestions (A list of the experts is attached in the appendixes of the study)

5. Procedure:

After the students were chosen, the teacher conducted the pre test to measure the current knowledge of the students in the area of knowing letter sound correspondence. After that, the researcher started the intervention for two month with 45 minutes session three days per week

6 Materials

Every student got a file with worksheets and flashcards about the letters with lowercase and uppercase shape of letters. Besides that, the researcher prepared a list of multi sensory approach activities for each letter and its sounds to be done by the student.

7 The intervention

The process of teaching student to identify and recognize the sounds of the letter was done through a multi sensory approach activities which consists of visual, tactile, kinaesthetic and auditory drills which aim to help the student to link all these activities with the skills of identifying the sounds. Every sound was presented to the students through these activities in the coming points the researcher will give examples in how to introduce the new sounds.

7.1 Visual activities:

In this part, the teacher will show the card with the letter to the student and will say the sound to the student for example : the sound of this letter is /aaaaaaa/ teacher will ask the student to repeat the sound when he shows to him the card of letter A After that the teacher will give to the student a worksheet that has lots of letters and will ask the student to circle the sound of letter A the teacher then will ask the student to look for sound A in a plastic letters and asks the student to say the sound when he found the letter.

7.2 Auditory activities

In that part , the teacher will ask the student to say the sound of the letter when the teacher show a flashcard to him then when the student says the sound correctly the teacher will examine the ability of the student to recognize the sound and discriminate it by putting some of the letters in front of the student and he will ask him to pick up a letter when he listens to its sound.

7.3 Kinaesthetic activities:

In that part students will be asked to draw the sound of the letter in the air when the teacher says the sound for them also the teacher will ask them to use their finger to paint the letter and while they are painting the letter they

must say the sound

7.4 Tactile activities:

In this part , the teacher will prepare a sand tray to the students and they will be asked to draw the letter and says its sounds when the teacher show them a model of the letter. Furthermore , another activity for the tactile part is asking the student to draw the letter and says its sound on their hands or their arms which activate the student to remind the shape of the letter

Statistical analysis :

8. findings of the study :

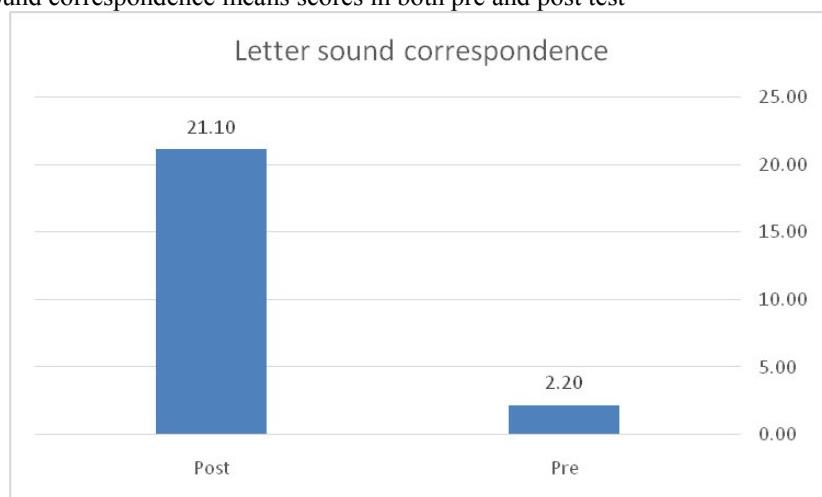
To examine the differences between the pre test and post test, paired sample T test was conducted. Table (1.2) shows the results

Table (1.2) Results of Paired Samples T -Test for significance of differences between the means of the pretest and post-test in letter sound correspondence.

Test	No	Mean	Std. Deviation	T	DF	Sig.
pre	20	2.20	1.795	-44.099	19	0.000
post	20	21.10	1.944			

In the table above (1.2) shows the sample of the study in both pre test and post test in the pre test the means of the scores of the student is (2.20) while the standard deviation is (1.795) on the other hand, the means of the scores of same students in the post test is (21.10) and the standard deviation is (1.944) the t-test value was (-44.099) and the degree of freedom was 19. The significance value is less than (0.05) and that can be a proof to reject the null hypothesis one and which also can be explained by observing the effectiveness of the multisensory approach in teaching the mild intellectual students to learn the English letters

Figure (1.1) letter sound correspondence means scores in both pre and post test



9. Discussion

There are lots of studies that discussed the use of the multi sensory approach in teaching literacy skills for different types of students but according to the literature review which indicated to the widespread of the use of the multi sensory approach among the students which suffers from dyslexia and other types of learning disability. Furthermore, it was also used with special needs students like the study of Davis (2011) who examined the effectiveness of the multi sensory approach in teaching students with emotional and behavioural disorders to learn reading skills the findings of his study refers to the effectiveness of the multi sensory approach in teaching and it also indicate to the benefits of Orton and Gillingham approach in teaching students with emotional and behavioural disorders. The use of the multi sensory approach to teach Arabic learners some reading skills in the field of the Arabic language was used in the study of Hazoury , Oweini and Bahous (2009) in their study to teach some dyslexic students decoding skills in the Arabic language , the results of the study revealed that the use of the multi sensory approach was useful and effective to teach the students the decoding skills in the Arabic language.

Al Elaimat (2009) investigated a proposed program to teach reading skills to dyslexic students in Jordan and his study used a combined method of Orton and Gillingham method and Vygotsky theory to test the effectiveness of proposed program in improving the basic reading skills and he claimed that the proposed method was more effective in teaching letter sound and letter identification and reading skills than the traditional method.

Jubran (2012) also examined the effectiveness of the multi sensory approach for teaching English

language skills for grade ten in Jordanian public schools. The findings of the study proved that the multi sensory approach was more effective than the tradition way in teaching the English language skills.

After the abovementioned part, the results of this study coincide with these studies in terms of the effectiveness use of multi sensory approach in teaching students to identify and recognize literacy skills starting from letters to letter sound correspondence to the reading of different types of words.

10 Conclusions:

This study sought to examine the effectiveness of the multi sensory approach in teaching the mild intellectual disabled student to identify and name the sounds of the English alphabets. After analyzing the data it was noted that there significant differences between the means of the pre test and the post test scores of the students which can be explained as the multi sensory approach activities helped the students to learn the letter sound correspondence.

11. Implications and suggestion for future research:

This study adds the literature review of teaching reading and pre reading skills to the mild intellectual disabled students in general and in the Arabic literature specifically as it is considered to be first in this area. Special education teachers has to find out more activities and creative ways to help students with identifying the letters and its sounds in order to help them to step forward to learn literacy skills.

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